

WHAT IS CLAIMED IS:

1. A method of manufacturing a long-life heat-resisting low alloy steel welded component including the steps of subjecting a base metal containing, at %
5 by weight, C: 0.15% or less, Si: 0.5% or less, Mn: 0.3 to 0.8%, Cr: 1.9 to 2.6%, Mo: 0.87 to 1.20%, and a balance of iron and unavoidable impurities, to a hot working, to a heat treatment, and then to a welding, wherein the base metal is normalized once or more times
10 before the welding in addition to the hot working.

2. The manufacturing method according to claim 1, wherein the base metal has been subjected to annealing or normalizing and tempering.

3. The manufacturing method according to claim 1,
15 wherein the base metal is subjected to the hot working in a normalizing temperature range, after the normalizing.

4. The manufacturing method according to claim 1, wherein the base metal contains, at % by weight, Mn:
20 0.3 to 0.6% and Mo: 0.87 to 1.13%.

5. The manufacturing method according to claim 4, wherein the normalizing of the base metal is carried out at least twice.

6. A method of manufacturing a long-life heat-resisting low alloy steel welded component including the steps of subjecting a base metal containing, at %
25 by weight, C: 0.04% to 0.10%, Si: 0.5% or less,

Mn: 0.1 to 0.6%, Cr: 1.9 to 2.6%, Mo: 0.05 to 0.3%,
V: 0.20 to 0.30%, Nb: 0.02 to 0.08%, W: 1.45 to 1.75%,
B: 0.0005 to 0.006% and a balance of iron and
unavoidable impurities, to a hot working, to a heat
5 treatment, and then to a welding, wherein the base
metal is normalized once or more times before the
welding in addition to the hot working.

7. The manufacturing method according to claim 6,
wherein the base metal has been subjected to annealing
10 or normalizing and tempering.

8. The manufacturing method according to claim 6,
wherein the base metal is subjected to the hot working
in a normalizing temperature range, after the
normalizing.

15 9. A method of manufacturing a long-life heat-
resisting low alloy steel welded component including
the steps of subjecting a base metal containing, at %
by weight, C: 0.2% or less, Si: 1.0% or less, Mn:
0.3 to 0.9%, Cr: 0.3 to 1.5%, Mo: 0.4 to 0.7%, and
20 a balance of iron and unavoidable impurities, to a hot
working, to a heat treatment, and then to a welding,
wherein the base metal is normalized once or more times
before the welding in addition to the hot working.

10. The manufacturing method according to claim 9,
25 wherein the base metal has been subjected to annealing
or normalizing and tempering.

11. The manufacturing method according to claim 9,

wherein the base metal is subjected to the hot working in a normalizing temperature range, after the normalizing.

12. The manufacturing method according to claim 9,
5 wherein the base metal contains, at % by weight, Mn:
0.3 to 0.6%, Cr: 0.5 to 1.5% and Mo: 0.40 to 0.65%.

13. The manufacturing method according to claim 9,
wherein the base metal further contains, at % by weight,
V: 0.22 to 0.50%.

10 14. A long-life heat-resisting low alloy steel
welded component manufactured by the steps of
subjecting a base metal containing, at % by weight,
C: 0.15% or less, Si: 0.5% or less, Mn: 0.3 to 0.8%,
Cr: 1.9 to 2.6%, Mo: 0.87 to 1.20%, and a balance of
15 iron and unavoidable impurities, to a hot working, to
a heat treatment, and then to a welding, wherein the
base metal is normalized once or more times before the
welding in addition to the hot working.

15 15. The heat-resisting low alloy steel welded
component according to claim 14, wherein the base metal
has been subjected to annealing or normalizing and
tempering.

16. The heat-resisting low alloy steel welded
component according to claim 14, wherein the base metal
25 is subjected to the hot working in a normalizing
temperature range, after the normalizing.

17. The heat-resisting low alloy steel welded

component according to claim 14, wherein the welded component can be applied to at least one of longitudinal joint and circumferential joint of pipes, vessel, valve casing and branch pipes that are used under
5 a high-temperature and high-pressure steam atmosphere at a temperature of 450°C or higher.

18. The heat-resisting low alloy steel welded component according to claim 14, wherein the base metal contains, at % by weight, Mn: 0.3 to 0.6% and Mo: 0.87
10 to 1.13%.

19. The heat-resisting low alloy steel welded component according to claim 18, wherein the normalizing of the base metal is carried out at least twice.

20. A long-life heat-resisting low alloy steel
15 welded component manufactured by the steps of subjecting a base metal containing, at % by weight, C: 0.04% to 0.10%, Si: 0.5% or less, Mn: 0.1 to 0.6%, Cr: 1.9 to 2.6%, Mo: 0.05 to 0.3%, V: 0.20 to 0.30%, Nb: 0.02 to 0.08%, W: 1.45 to 1.75%, B: 0.0005 to 0.006%
20 and a balance of iron and unavoidable impurities, to a hot working, to a heat treatment, and then to a welding, wherein the base metal is normalized once or more times before the welding in addition to the hot working.

21. The heat-resisting low alloy steel welded
25 component according to claim 20, wherein the base metal has been subjected to annealing or normalizing and tempering.

22. The heat-resisting low alloy steel welded component according to claim 20, wherein the base metal is subjected to the hot working in a normalizing temperature range, after the normalizing.

5 23. The heat-resisting low alloy steel welded component according to claim 20, wherein the welded component can be applied to at least one of longitudinal joint and circumferential joint of pipes, vessel, valve casing and branch pipes that are used
10 under a high-temperature and high-pressure steam atmosphere at a temperature of 450°C or higher.

24. A long-life heat-resisting low alloy steel welded component manufactured by the steps of
subjecting a base metal containing, at % by weight,
15 C: 0.2% or less, Si: 1.0% or less, Mn: 0.3 to 0.9%,
Cr: 0.3 to 1.5%, Mo: 0.4 to 0.7%, and a balance of iron
and unavoidable impurities, to a hot working, to a heat
treatment, and then to a welding, wherein the base
metal is normalized once or more times before the
20 welding in addition to the hot working.

25. The heat-resisting low alloy steel welded component according to claim 24, wherein the base metal has been subjected to annealing or normalizing and tempering.

25 26. The heat-resisting low alloy steel welded component according to claim 24, wherein the base metal is subjected to the hot working in a normalizing

temperature range, after the normalizing.

27. The heat-resisting low alloy steel welded component according to claim 24, wherein the welded component can be applied to at least one of
5 longitudinal joint and circumferential joint of pipes, vessel, valve casing and branch pipes that are used under a high-temperature and high-pressure steam atmosphere at a temperature of 450°C or higher.

28. The heat-resisting low alloy steel welded
10 component according to claim 24, wherein the base metal contains, at % by weight, Mn: 0.3 to 0.6%, Cr: 0.5 to 1.5% and Mo: 0.40 to 0.65%.

29. The heat-resisting low alloy steel welded component according to claim 24, wherein the base metal
15 further contains, at % by weight, V: 0.22 to 0.50%.